Remarks

The Office Action mailed November 1, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 4-35 and 37-45 are now pending in this application. Claims 7-34, 37, and 39-45 have been withdrawn. Claims 4, 35, and 38 have been amended to require both the β and γ to comprise a second amino acid sequence encoding at least one of a second fluorescent and luminescent protein. Support for these amendments can be found in Figures 27 and 28. Claims 1-6, 35, and 38 stand rejected.

The rejection of Claims 1-3 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement is respectfully traversed. Claims 1-3 have been canceled. Accordingly, Applicants respectfully request that the Section 112 rejection of Claims 1-3 be withdrawn.

The rejection of Claims 4-6, 35, and 38 under 35 U.S.C. § 103(a) as being unpatentable over Devreotes et al. (U.S. Patent Application Publication 2002/0048811) (hereinafter referred to as "Devreotes") in view of Wittamer et al. (U.S. Patent Application Publication 2003/0104478) (hereinafter referred to as "Wittamer") is respectfully traversed.

Devreotes describes activation of heterotrimetric G-proteins that is visualized in living cells by monitoring a fluorescence resonance energy transfer (FRET) between subunits of G-protein fused to cyan and yellow fluorescent proteins. Wittamer describes screening assays for the identification of candidate compounds and G-protein coupled receptor signaling. Notably, neither Devreotes nor Wittamer, considered alone or in combination, describes or suggests a biosensor including mammalian G protein subunits that include a mammalian α subunit including a first amino acid sequence encoding a first fluorescent and/or a luminescent protein and a mammalian subunit complex, wherein the complex has a β subunit and a γ subunit **both** including a second amino acid sequence encoding a second fluorescent and/or luminescent protein.

Claim 4 recites a live functional biosensor comprising "a mammalian α subunit comprising a first amino acid sequence encoding a first fluorescent protein and a mammalian βγ subunit complex, wherein each of the β subunit and γ subunit comprise a second amino acid sequence encoding a second fluorescent protein."

Claim 35 recites a live functional G protein biosensor cell comprising "a mammalian α subunit comprising a first amino acid sequence encoding a first fluorescent protein fused to a G protein coupled receptor and a mammalian β subunit and a mammalian γ subunit both comprising a second amino acid sequence encoding a second fluorescent protein."

Claim 38 recites a live functional G protein biosensor cell comprising "a mammalian alpha subunit comprising a first amino acid sequence encoding a first fluorescent protein, and a beta subunit and a gamma subunit both comprising a second amino acid sequence encoding a second fluorescent protein, wherein the first amino acid sequence is fused to the mammalian beta subunit and gamma subunit."

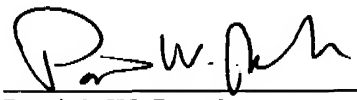
Neither Devreotes nor Wittamer, considered alone or in combination, describes a biosensor as recited in Claims 4, 35, and 38. More specifically, neither Devreotes nor Wittamer, considered alone or in combination, describes or suggests a biosensor including a mammalian α subunit that includes a first amino acid sequence encoding a first fluorescent and/or a luminescent protein and **mammalian β and γ subunits both including a second amino acid sequence encoding a second fluorescent and/or luminescent protein**. Rather, Devreotes merely describes visualizing activation of heterotrimetric G-proteins in living cells by monitoring a fluorescence resonance energy transfer (FRET) between two subunits of G-protein fused to cyan and yellow fluorescent proteins; and Wittamer merely describes screening assays for the identification of candidate compounds and G-protein coupled receptor signaling. Accordingly, Claims 4, 35, and 38 are submitted to be patentable over Devreotes in view of Wittamer.

Claims 5 and 6 depend from Claim 4. When the recitations of Claims 5 and 6 are considered in combination with the recitations of Claim 4, Applicants submit that Claims 5 and 6 likewise are patentable over Devreotes in view of Wittamer.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 4-6, 35, and 38 be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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